

DWR Climate News Digest

April 2018

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The information provided in the DWR Climate News Digest is a selected compilation of recent popular news articles, publications, and other information relevant to climate change and water management, and is intended to provide educational and thought-provoking material for water managers and water users.

To subscribe to the DWR Climate News listserv and receive notifications when new editions are posted, send an email to: climatechange@water.ca.gov.

TOPICS

Agriculture/Food Production

[Our growing taste for shrimp is bad news for climate change](#)

[Science – April 2, 2018] “The amount of carbon dioxide (CO₂) emitted by fishing vessels rose 28% from 1990 to 2011, according to a new study, thanks largely to a greater haul of this premium seafood.”

[The arid US Midwest just crept 140 miles east thanks to climate change](#)

[Quartz – April 13, 2018] “There’s a line that stretches down North America, singeing into the continent a border that separates an arid west from a humid east. And it’s on the move.”

General Water Management

[How are California water managers thinking about climate change? It depends](#)

[The Confluence – April 4, 2018]

“When it comes to using climate change science to help guide decisions, researchers have found that California water managers fall into three fairly distinct groups based on how they work with scientific information and how they think about the future.”

[What do shrinking snowpack, warmer winters spell for western US water supply?](#)

[AccuWeather – April 2, 2018] “With increasingly warmer winters and a diminishing snowpack in recent years, the lack of snowmelt might pose problems for the communities that need it.”

Sea-Level Rise and other Ocean Impacts

[Antarctica's Underwater Ice Is Retreating 5 Times Faster Than It Should Be](#)

[Live Science – April 3, 2018] “When you imagine an Antarctic glacier melting, you probably envision great walls of ice avalanching into the ocean in jagged, splashing chunks. This is certainly happening — but it's only half the story.”

[Want to Fight Sea Level Rise? Look to San Francisco's Ocean Beach](#)

[Wired – April 11, 2018] “It's all part of a plan to adapt to inevitability, which could set precedent for how this and other coastal cities fight rising seas.”

Extreme Weather Events

[California's deadly 1862 flood likely to repeat within 50 years, study says](#)

[SF Chronicle – April 23, 2018] “Because of the warming atmosphere, the type of storms that produced the record flooding 156 years ago will probably be three to four times more frequent by the end of this century.”

[Climate change will make California's drought-flood cycle more volatile, study finds](#)

[Los Angeles Times – April 23, 2018]
“UC researchers in essence found that California's highly volatile climate will become even more volatile as human-caused climate change tinkers with atmospheric patterns over the eastern Pacific Ocean.”

Human Health Impacts

[Climate Change Is Making Deadly Air Pollution Worse in Cities Across the U.S.](#)

[Time – April 19, 2018] “Environmentalists worry that climate change could cause problems with rising sea levels and crop failures in the coming decades, but one group of researchers has found it's already causing health problems now.”

[Climate Change, Public Health, and Policy: A California Case Study](#)

[American Journal of Public Health – April 26, 2018] “California's progress in addressing the public health challenges of climate change in the San Joaquin Valley was explored as an example.”

Tribal Impacts & Traditional Ecological Knowledge

[Native Americans Fighting Fossil Fuels](#)

[Scientific American – April 9, 2018] “Indigenous people are rejecting oil, coal and gas extraction in favor of renewable energy to save their land, increase employment and fight global warming.”

Wildlife and Ecosystem Impacts

[5 Plants and Animals Utterly Confused by Climate Change](#)

[New York Times – April 4, 2018] “Global warming is causing spring to arrive early and autumn to come late in many places, and not all species are adapting at the same rate.”

[Ocean Heat Waves Are Getting Worse](#)

[Scientific American – April 11, 2018] “Spikes in sea temperatures stress marine ecosystems, particularly coral reefs. The researchers say that rising ocean temperatures, driven by human-caused climate change, are mostly to blame.”

Greenhouse Gas Mitigation

[Carbon taxes could make significant dent in climate change, study finds](#)

[MIT News – April 6, 2018] “Several different carbon-pricing approaches would help reduce emissions, and some would be fair as well, researchers report.”

[Trump administration drafts plan to challenge California on auto emissions standards](#)

[Washington Post – April 30, 2018] “The Trump administration asserts that, despite the Clean Air Act waiver, a separate federal law preempts California from drafting its own emissions standards.”

Climate Change Modeling

[New exascale system for earth simulation](#)

[Lawrence Livermore National Laboratory – April 23, 2018] “After four years of development, the Energy Exascale Earth System Model (E3SM) will be released to the broader scientific community this month.”

[Atmospheric Teleconnections: Advanced Tools and Citizen Science](#)

[EOS – April 17, 2018] “To better understand atmospheric teleconnections, the next generation of climate scientists must be holistically trained in the underlying physics, climate modeling, and innovative data analyses techniques.”

Climate Change Adaptation

[Forced to Move: Climate Change Already Displacing U.S. Communities](#)

[KCET – April 26, 2018]
“While the global displacement and migration of lower and middle-income countries make headlines, the U.S. is not immune to these situations.”

[New report on climate change in the Sierra Nevada shows need for human adaptation](#)

[UCLA – April 4, 2018] “From water resources to wildfires, UCLA research reveals a climate future that will have wide-ranging consequences.”

International Planning

[Around the globe, museums seek to solve climate change](#)

[Christian Science Monitor – April 12, 2018] “Curators are planning a new wave of museums devoted to climate change. They are pushing city planners and experts to use museums to foster empathy in citizens on climate issues, which will also be used as platforms for scientists to have their voices heard.”

[Clear signs of global warming will hit poorer countries first](#)

[Nature – April 20, 2018]

“New climate-inequality tool quantifies how quickly the weather will veer beyond normal in different regions.”

Communicating Climate Change

[How I Talk to My Daughter about Climate Change](#)

[The Atlantic – April 5, 2018]

“As a reporter covering the environment, I'm all too aware of what the next 50 years could hold. As a 9-year-old, she's not—and for now, she wants to stay that way.”

[Study explores discrepancy between scientists', public's views on climate change](#)

[Yale Daily News – April 24, 2018] “The study, published in the journal Nature Climate Change, suggests that the populations least concerned with climate change may respond most to educational, pro-climate change messages.”

BLOGS/Commentary

[The daunting math of climate change means we'll need carbon capture](#)

[MIT Technology Review – April 24, 2018]

“One leading expert describes what it would take to do it economically—and on a huge scale.”

Additional Items of Interest

[Climate change and automation threaten economic convergence](#)

[Financial Times – April 19, 2018] “Workers from catch-up nations face a more hostile environment than their predecessors.”

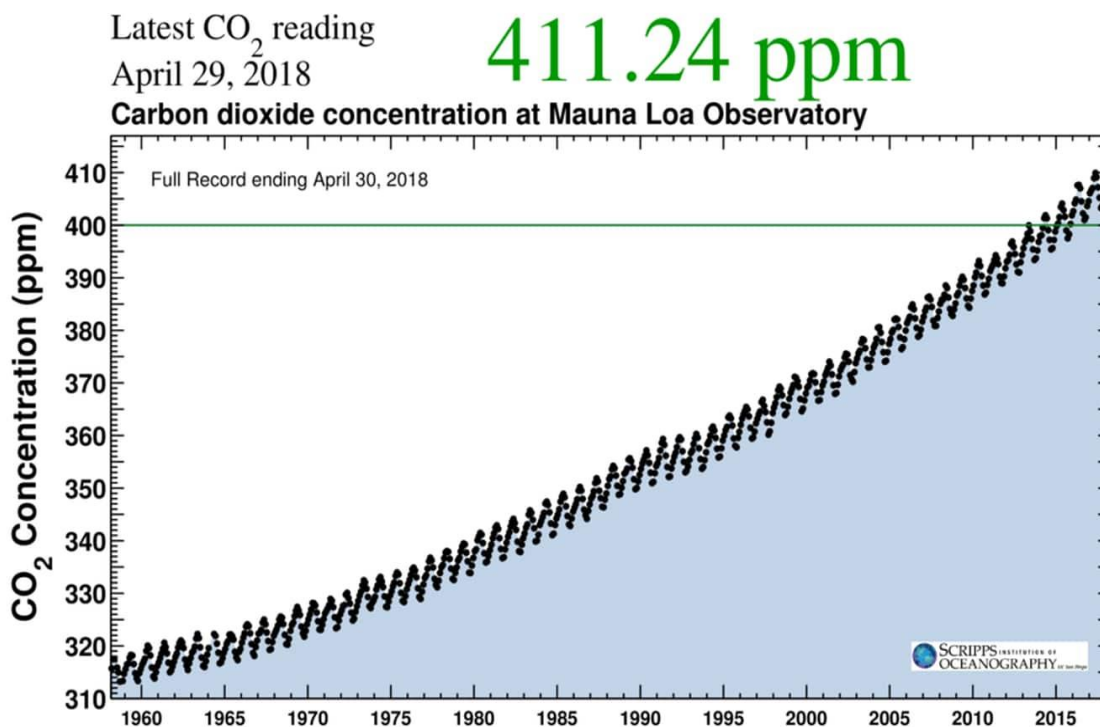
[Sometimes Fighting Climate Change Means Breaking the Law](#)

[The New Yorker – April 3, 2018] “Traditionally, in the law, necessity has been a narrow defense. It can be difficult to prove, and is usually limited to cases in which the threat is clear and concrete. Would the necessity defense still hold as related to climate change?”

Four Billion Years of Climate Change

[Science Friday – April 27, 2018] “It’s not uncommon these days to hear scientists and journalists say that our planet is experiencing record-setting temperatures due to climate change. But they’re talking about a small part of Earth’s history—human history. The story of the earth’s climate contains much more than what human beings have recorded.”

Images to Ponder



Source: Washington Post

Earth’s atmosphere just crossed another troubling climate change threshold

“For the first time since humans have been monitoring, atmospheric concentrations of carbon dioxide have exceeded 410 parts per million averaged across an entire month, a threshold that pushes the planet ever closer to warming beyond levels that scientists and the international community have deemed “safe.”

The reading from the Mauna Loa Observatory in Hawaii finds that concentrations of the climate-warming gas averaged above 410 parts per million throughout April.”

Current and past editions of the DWR Climate News Digest can be viewed and downloaded at:
<http://www.water.ca.gov/climatechange/news.cfm>. Please email questions, comments, or listserv subscription requests to:
climatechange@water.ca.gov.